

Title (en)
Method and device for measuring the concentration of chemical species and the temperature in the combustion chamber of a thermal plant

Title (de)
Verfahren und Vorrichtung zur Messung der Konzentration einer chemischen Substanz und der Temperatur im Verbrennungsraum einer thermischen Anlage

Title (fr)
Méthode et dispositif pour déterminer la concentration de substances chimiques et la température dans la chambre de combustion d'un appareil thermique

Publication
EP 0922908 A1 19990616 (EN)

Application
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Priority
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Abstract (en)
To measure the concentration of chemical species and the temperature in a combustion chamber (2) of a thermal plant, a laser beam (4), previously modulated to scan its wavelength about a maximum-absorption frequency of the chemical species of interest, is directed into the chamber (2). A main portion (4a) of the laser beam (4) is directed into the chamber (2), is filtered by an optical filter (22), and is acquired at the output of the chamber (2) to obtain a measuring signal (S), which is subsequently filtered by an electronic filter (23b), is standardized to reduce noise and eliminate undesired signal contributions, and is finally supplied to a processing unit (9). A secondary portion (4b) of the laser beam (4) is directed into a reference cell (24) containing a known concentration of the chemical species, to obtain a reference signal (R) by which to regulate the scanning band of the laser diode (3). <IMAGE>

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IPC 8 full level
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CPC (source: EP)
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Citation (search report)

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